

Title (en)
Optics and environmental protection device for laser processing applications.

Title (de)
Optik- und Umweltschutzvorrichtung für Laserbehandlungsverfahren.

Title (fr)
Dispositif de protection de l'environnement et de l'optique pour des applications de traitement par faisceau laser.

Publication
EP 0618037 A1 19941005 (EN)

Application
EP 94104847 A 19940328

Priority
US 4232493 A 19930402

Abstract (en)
An optics and environmental protection device for laser processing applications in which a laser processing assembly including a laser beam source is used to process a substrate (22). The laser processing assembly includes an optical focusing assembly (21) including at least one lens (2) located between the laser source and the substrate (22) for focusing the laser beam (1) on the substrate (22). The optics and environmental protection device includes a housing (23) defining a chamber (24) located between the optical focusing assembly (21) and the substrate (22). The housing (23) includes a first opening (25) located adjacent to the optical focusing assembly (21) for admitting the laser beam (1) into the chamber (24), a second opening (26) located adjacent to the substrate (22) which allows the beam (1) to exit the chamber (24), a third opening (29) adjacent to which a source of pressurized gas is located, and a fourth opening (41) adjacent to which a vacuum source is located. Pressurized gas and a vacuum source direct smoke, vapor, particles, and other debris produced by the laser processing away from the optical focusing assembly (21) and the substrate (22) and toward the fourth opening (41) in the housing (23). The vacuum source also removes the smoke, vapor, and particles from the chamber. <IMAGE>

IPC 1-7
B23K 26/14; **B23K 26/16**

IPC 8 full level
B23K 26/064 (2014.01); **B23K 26/142** (2014.01); **B23K 26/382** (2014.01); **H05K 3/00** (2006.01); **H05K 3/06** (2006.01); **H05K 3/08** (2006.01)

CPC (source: EP US)
B23K 26/082 (2015.10 - EP US); **B23K 26/1476** (2013.01 - EP US); **H05K 3/0017** (2013.01 - EP US)

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Designated contracting state (EPC)
DE FR GB

DOCDB simple family (publication)
EP 0618037 A1 19941005; **EP 0618037 B1 19970604**; DE 69403532 D1 19970710; JP 2549265 B2 19961030; JP H06285668 A 19941011; US 5359176 A 19941025

DOCDB simple family (application)
EP 94104847 A 19940328; DE 69403532 T 19940328; JP 941394 A 19940131; US 4232493 A 19930402